ISSN 0704-3716

Canadian Translation of Fisheries and Aquatic Sciences

No. 5298

High quality raw material a condition for success

O. Okland

Original title: Hoy rastoffkvalitet en forutsetning for a lykkes

In: Fiskets Gang 9(17): 267-268, 1986

Original language: Norwegian

Available from:
Canada Institute for Scientific and Technical Information
National Research Council
Ottawa, Ontario, Canada K1A 0S2

1987

7 typescript pages

Secretary of State / Secrétariat d'État

90-02117/

MULTILINGUAL SERVICES DIVISION – DIVISION DES SERVICES MULTILINGUES

TRANSLATION BUREAU **BUREAU DES TRADUCTIONS**

Client's No.–N° du client	Department – Ministère	Division/Branch – Division/Direction	City – Ville
LSM-6-00910	DFO	IPB	Halifax
Bureau No.–N° du bureau	**Language – Langue**	**Translator (Initials) – Traducteur (Initiales)**	
2909919	Norwegian	G.A.W.	JAN 13 1987

High Quality Raw Material a Condition for Success

Fiskets Gang, No. 9, Week 17, 1986

UNEDITED TRANSLATION
For information only
TRADUCTION NON REVISEE
Information seulement

Canada

TORO focusses on raw material from the fishing industry: 267

High Quality Raw Material a Condition for Success

by Oystein Okland

Bi-products from fish are usually associated with waste products that find the shortest route to the garbage disposal. This is, however, a myth which should be laid bare instantly. In fact, high quality bi-products, which are often used for the production of minced fish, are being used today also as a source of raw material for the hightech food processing industry in the production of fish powder. Toro Næringsmiddelindustri [Toro Food Industry] in Bergen, Norway, which is a division of the Rieber Concern, today utilizes several hundred tons of fish bi-products a year for its production of fish powder. These bi-products mainly consist of the so-called V-cuts from coal-fish. The TORO powder is exported in bulk chiefly as a half finished product to the so-called flavour industry where the powder constitutes an essential component in the seafood flavour of a series of food products.

Last year, TORO produced considerable quantities of fish powder for export purposes in addition to the fish powder which is the chief component in, for instance, the well-known TORO Soups. A series of these soups are exported to several countries.

TORO is currently developing a new advanced technique for the production of seafood powder. Completely new methods will be used. The company also plans to concentrate on techniques which will protect unstable or fatty raw material against oxidation.

High Quality Raw Material

TORO is concentrating first and foremost on the V-cut. Process eveloper Trond Raa, a graduate in fisheries studies, who works in TORO's Department, tells Fiskets Gang that high quality raw material is a prerequisite for a good powder product.

- Our fish powder products are based on the bi-products from the fish filet industry, above all from the coal fish. We receive the raw material frozen in block form. These blocks are cut up, heat-treated, and finally put into a grinder. Following the grinding process, the material is dried, cleaned, and subsequently micro-ground to a size of 0.1 millimetres. Then it is packaged, Raa says. The final fish powder product contains 95% dry matter, of which 86% is protein. In terms of nutrition, the protein is of just as good quality as before the dehydration process.

- Has there been an increase in the production of fish powder over the past few years?

On the Increase

- Yes, our production of powder is increasing, Raa says. He further emphasizes that the fish powder is definitely a half-finished product. - The powder is packaged in cartons holding 12 kg and is mainly shipped in containers to European Common Market countries.

- The flavour industry is our main customer. They use the powder as a seafood flavour component in a series of food products. The TORO powder may be found in soups, seafood sauces, seafood snacks, and in many other products - as well as in analogous surimi products. Incidentally, we have great expectations with regard to surimi.

In addition to coal fish bi-products for their fish powder production, TORO utilizes as raw material shrimp, crab , lobster, mussel , and squid in their production of other powders and granulated meal. Granulated meal is a somewhat co rser powder than the fine fish powder. Several new types of products are being developed, Raa says. He makes no secret of the fact that TORO has staked much on this type of production. However, it is quite clear that the fish powder constitutes by far the largest component in the company's production. The quantity of shrimp powder produced in 1985 made up 1/4 of the fish powder production. Granulated meal from mussels and lobsters, as well as squid powder currently make up a relatively small share of the production. Small shrimps form the raw material in the production of shrimp powder. Whole shrimps are used in the production process in order to ensure that the red colour is maintained and that the powder has a good strong flavour.

TORO exercises rigorous control of the raw material as well as the finished product. Anita Paulsen, Laboratory Assistant, is shown here analyzing a sample.

- We aim our products at a specific target group, and we use expensive raw materials and expensive technology. Our prices pr. kg produced are 268
therefore relatively high. Our powders meant for human consumption must, therefore, not be mistaken for fish meal which is produced from whole, fatty fish for fodder purposes, Raa emphasizes.

Rigorous Control

TORO exercises rigorous control of the raw materials as well as the finished products. Samples of the raw material are bacteriologically and chemically tested, and tested with sensors before a shipment of raw material receives the stamp of approval. It happens relatively frequently that the samples do not meet the strict requirements. However, there is good cooperation between TORO and their suppliers. During the production, the product is likewise examined with "Argus-eyed" vigilance. Every hour samples are extracted and examined under microscopes in the laboratory. Naturally, the finished products are also tested. Microscopic bits of metal are not allowed to slip through the processing either. An advanced metal detector is responsible for finding bits of fishing hooks, screws, etc. embedded in the raw material.

Alternative Sources of Raw Material

The Product Development Section at TORO's is still considering using alternative sources of raw material, such as blue whiting and various types now being used for minced fish.

Raa says that all the different types of products have now been introduced to the EEC. Apparently squid powder, the latest newcomer from TORO, is being well received. Squid powder has a stronger flavour than fish powder,

and besides, it is cheap. TORO is able to offer this product to buyers outside Norway at a price which is below the price of fish powder.

TORO is currently developing new advanced techniques for the production of seafood powder, says Trond Raa who is with the FOU Department at TORO's.

Every hour samples are taken from the production line for the laboratory. Shown in this photo is Gerd Knutsen, Laboratory Assistant.

- Generally speaking, we are interested in trying out new raw materials from filets, cuts, or minced fish, says Raa.

- What are the requirements imposed by the customers with regard to the powder products?

- The powder must first of all be "clean," i.e. no additives, such as antioxidants, starch, or artificial substances. This is our sales image, says Raa who considers the marketing potential to be good.

- Where can you expand?

Expansion in the U.S. Market

- We are already in the U.S. market, and I think that possibilities exist for increasing our share of that market, says Raa. He further explains that the reason for this may be found in the fact that seafood is now "in," not only in the United States, but in large parts of the western world. Furthermore, fish powder is rich in protein and has a low content of fat (2.5%). Fish and various fish products are also capturing an increasingly large share of the snack market.

- Is there any competition?

- No other company in Norway produces the kind of powders that we produce. The fish powder from the company Nordsildmels is a different kind of powder and aimed at a totally different market. Our fish powder is produced for the flavour industry. We have, however, taken note of the fact that on the Faroe Islands, a company has appeared on the scene with a fish powder.

Mollusc and Shellfish Powder to Be Used in feed for farmed salmon ?

With respect to the market for squid powder, Raa is convinced that the

manufacturers of fodder for the fish farm (stocking fish) industry will become good customers.

- Some of the types of seafood powder from the Rieber & Son Concern may in the future constitute an important ingredient in the special fodder for aquatic organisms (start-up fodder). It is a well-known fact that squid and mussels, for instance, have an attractive and/or stimulating effect on fish fry at the time when one first starts feeding them. Squid will also be a necessary ingredient in the fodder given to several species of fish to improve their growth. Our seafood powder has been tried in several fish fry feeds developed by other companies. These companies have also carried out promising fodder experiments with species of fish and shellfish, such as shrimps, salmon, and turbot, Raa says. He further states that, at least for the time being, there is no lack of raw material for the production of squid powder. This powder is manufactured from the arms of squids which belong to species that are currently in surplus stock. Between 25 and 30 % of the squid consists of arms. These squids are used relatively little by the fishing industry.

By Øystein Økland